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Public Utility Commission of Texas

Memorandum

TO: Interim Chairman Kathleen Jackson
Commissioner Lori Cobos
Commissioner Jimmy Glotfelty

Interested Parties

FROM: Harika Basaran, Market Analysis
Chris Brown PhD, Market Analysis

DATE: January 19, 2024

RE: February 1, 2024, Open Meeting – Item No. **XX**
Project No. 55845 – *Review of Ancillary Services in the ERCOT Market*

BACKGROUND:

PURA § 35.004 requires the Commission to conduct a review of ancillary services in the ERCOT market. Specifically:

(g) The commission shall: (1) review the type, volume, and cost of ancillary services to determine whether those services will continue to meet the needs of the electricity market in the ERCOT power region; and (2) evaluate whether additional services are needed for reliability in the ERCOT power region while providing adequate incentives for dispatchable generation.

(h) The commission shall require the independent organization certified under Section 39.151 for the ERCOT power region to modify the design, procurement, and cost allocation of ancillary services for the region in a manner consistent with cost-causation principles and on a nondiscriminatory basis.

SCOPE:

The attached scoping document, drafted by Commission Staff, the IMM and ERCOT, addresses items under PURA § 35.004 (g). Staff and ERCOT anticipate additional guidance from the Commission regarding when and how to address cost allocation topics under subsection (h).

TIMELINES & MILESTONES:

Staff requests feedback on the following proposed timeline and milestones:

| | |
|--------------------|--|
| February 1, 2024 | Open meeting discussion of proposed scope and timelines |
| February 15, 2024 | Open meeting to finalize scope and timelines |
| March-July, 2024 | Periodic updates filed in this project |
| July 31, 2024 | Draft study presented to TAC |
| August 20, 2024 | Draft study presented to ERCOT Board |
| September 1, 2024 | Final study filed in Project No. 55845 |
| September-November | Commission reviews and finalizes the recommendations (workshop, stakeholder comments) |
| January 2025 | Study and final Commission recommendations presented to legislature as part of the biennial agency report. |

Interested parties may file written comments not to exceed five pages on the scope by January 31, 2024, noon.

January 19, 2024

Ancillary Services Study Scoping Document

Overview:

The Ancillary Services Study (Study) will be performed to assist the Commission in meeting the requirements of Senate Bill 3 from the 87th regular Texas legislative session, which states, in relevant part, that:

The commission shall: (1) review the type, volume, and cost of ancillary services to determine whether those services will continue to meet the needs of the electricity market in the ERCOT power region; and (2) evaluate whether additional services are needed for reliability in the ERCOT power region while providing adequate incentives for dispatchable generation.¹

The Study will be the sole deliverable and will be undertaken as a collaboration between the Electric Reliability Council of Texas, Inc. (ERCOT), the Independent Market Monitor (IMM), and Commission Staff (Staff).² The due date for the Study will be September 1, 2024.

Proposed Outline:

1. Executive Summary
2. ERCOT will conduct a review of the current suite of Ancillary Services (Regulation Service, Responsive Reserve Service, ERCOT Contingency Reserve Service, and Non-Spinning Reserve Service), including analyses regarding:
 - a. Purpose of each service³
 - i. Definition under ERCOT Nodal Protocols § 3.17, including description of any service sub-type(s)
 - ii. Qualification criteria, including citations to relevant ERCOT Nodal Protocols or Nodal Operating Guides
 - iii. Reliability requirements/obligations and risk mitigation for which the service is needed and used, including models used to assess the risks or Loss of Load Expectation (LOLE)

¹ PURA § 35.004(g).

² To the extent that the IMM's independent expert analysis differs, if at all, from ERCOT's expert analysis, the IMM will work with ERCOT to find solutions agreeable to both entities. If the entities cannot reach consensus, separate sections for ERCOT analysis and IMM analysis can be incorporated into the study.

³ This section of the study will address the language of PURA § 35.004(g)(1) requiring the Commission to review "the type" of ancillary services...

- iv. Actual use during real-time operations, including manual operator actions
- v. Changes, if any, in use and purpose of each service over a specified time frame,⁴ including specification of changes associated with the evolving fuel mix of dispatchable and non-dispatchable resources
- b. Determination of the quantity for each service⁵
 - i. Description of Ancillary Service methodology development and approval process
 - ii. The calculation of Ancillary Service quantities required to meet purpose of the service
 - iii. Procurement constraints, such as the limits on provision of any service by Load Resources controlled by high-set underfrequency relays
 - iv. Procedural timeline for determination of quantities and considerations
 - v. Changes in procurement amounts over a specified time frame, including specification of changes associated with the evolving fuel mix of dispatchable and non-dispatchable resources
- c. Annual cost and implied heat rate of each service over a specified time frame⁶
 - i. Include data for costs on a total basis and on a per MWh of Load basis
 - ii. Analysis of changes in costs and implied heat rate over a specified time frame
- d. The deliverable from this part of the Study will also satisfy the Ancillary Service Guidance Document requested by the Commission at the November 2, 2023 Open Meeting during discussion of Project No. 53298⁷
- 3. ERCOT will provide an update on the implementation of Dispatchable Reliability Reserve Service, including probable procurement methodology, proposed qualification criteria and how ERCOT Operations will likely deploy the service during real-time
- 4. Recommendations, if any, for changes to existing Ancillary Services to meet the evolving needs of the electricity market
 - a. ERCOT recommendations, including any supporting information (e.g., models, analyses, assumptions)
 - b. IMM recommendations, including any supporting information (e.g., models, analyses, assumptions)

⁴ A reasonable time period for this Study is from January 1, 2018 through 2024. ERCOT's Ancillary Service Methodology for 2024 was approved by the Board in December 2023 and should, therefore, be considered as within the specified time frame for this report. Additionally, particular attention should be paid to the time following implementation of conservative operations, which began in July 2021. During this time, ERCOT adopted a more conservative operating posture, including requiring additional operational reserves and committing more generation outside of the market. See https://www.ercot.com/files/docs/2021/06/30/ERCOT_Additional_Operational_Reserves_06302021.pptx.

⁵ This section of the study will address the language of PURA § 35.004(g)(1) requiring the Commission to review "the volume" of ancillary services...

⁶ This section of the study will address the language of PURA § 35.004(g)(1) requiring the Commission to review "the cost" of ancillary services...

⁷ P-53298 Wholesale Electric Market Design Implementation. OM November 2, 2023

- c. Staff analysis of ERCOT and IMM recommendations
 - d. Staff final recommendations, based on analysis of ERCOT and IMM recommendations
5. Discussion of additional services needed for reliability while providing adequate incentives for dispatchable generation, if any
 - a. ERCOT recommendations, including any supporting information (e.g. models, analyses, assumptions)
 - b. IMM recommendations, including any supporting information (e.g. models, analyses, assumptions)
 - c. Staff analysis of ERCOT and IMM recommendations
 - d. Staff final recommendations, based on analysis of ERCOT and IMM recommendations

Out of Scope Topics:

- Cost allocation of Ancillary Services
- Ability of Retail Electric Providers to pass through any Ancillary Service charges
- Implementation timeline or implementation project costs of changes recommended as a result of this Study